The Centers for Medicare and Medicaid Services (CMS): Doug Brown, Jason Zeiler, and Chris Kalck

Interview Q&As

1. Please describe your challenge:
   As part of the InterAgency Agreement between NASA and CMS, three challenges were conducted. In addition to the Medicaid Provider Screening Portal Challenge, two challenges were conducted under the auspices of the CMS Center for Program Integrity (CPI). Both of those challenges are captured here.

   a. What was the challenge?

      "The Healthcare Fraud Prevention Partnership (HFPP) Data Exchange Network Challenge."

      The primary objective of the challenge was to build a data exchange network that enables healthcare insurance-paying entities in both the public and private sector to safely and securely share information for purposes of prevention and detection of fraud, waste and abuse across partners.

      The principle tasks of this challenge involved:

      1. Defining a Data Standard for Exchanging Claims and Compromised Party Data
      2. Defining a Secure Data Exchange Network
      3. Defining and Implementing HFPP Trusted Third Party Role Support
      4. Providing Documentation that Drives Adoption
      5. Demonstrating the System with one or more Proof of Concept Applications

      View the output of this project or download the source code (open source) at: https://github.com/nasa/CoECI-CMS-Healthcare-Fraud-Prevention

      See more at: http://www.topcoder.com/cms/hfpp/

      This challenge launched in January, 2013, and was completed in December, 2013. The project was completed using 55 contests and included 1406 registrants from 52 different countries.

"The Open Payments App Challenge"

The primary objective of the challenge involved developing an iPhone app and reporting application to track and compile "transfers of value" (e.g., gift, meal, speaking fee) from industry manufacturers (e.g., pharmaceutical companies) to physicians.

The project had two primary objectives:

1. iPhone Application – Design and develop an iPhone application that quickly, securely, easily and unobtrusively captures transfer of value detail from both the industry representative and provider in real-time scenarios.
2. Report Host Web Application – Design and develop a lightweight, authenticated, secure, data collection and report host for installation and use by each vendor. The report host collects data from field-based data-capture tools, and aggregates it according to provider. The report host must be easy to install, configure, modify and maintain.

High Level Requirements

- Produce two applications (iPhone and reporting web app) that are easy to install and easy to use in order to foster high and active participation by vendors and providers.
- Develop solutions that are easy to grow and change in response to changes and new opportunities in use.
- Encourage innovation and diversity in data collection by defining a method of communication to inform 3rd party application developers supporting integration to validation engines.
- Develop Lightweight procedures for sustained use
- Streamline execution of and compliance with regulatory requirements to achieve high compliance rates.

View the output of this project or download the source code (open source) at https://github.com/nasa/CoECI-CMS-Open-Payment

See more at: http://www.topcoder.com/cms/open-payments-challenge/#sthash.fpDxCGnx.dpuf

The challenge launched in May, 2013, and was completed in December, 2013. The challenge was completed using 29 contests and included 740 registrants from 45 different countries.

b. Why did you select a challenge to solve your problem?
As we were struggling with these problems, the idea basically fell into our laps. Anita Griner, in discussions with Mazen Yacoub, became aware of the possibility

of running challenges. After looking at the Provider Screening Portal, it just looked like a great way to get some new ideas into the Program. We were made aware of it as a possible avenue and it looked intriquing. The stars were aligned so that we could start moving on it, and we just took advantage of it.

c. Has your organization used challenges in the past? If so, what were they?

We knew about the Medicaid Provider Screening Portal. Really Chip Garner was the salesman for the challenges. We were completely excited after talking to him. He gave us a personal introduction to this challenge-driven methodology.

d. What problem solving mechanisms had you already tried and for how long?

Both of these challenges came about relatively at the beginning of each program. For both Open Payments and HFPP, we hadn't done much. We had white boarded and talked through contract strategies. But HFPP and Open Payments were really just beginning.

e. Were there other mechanisms you used to try to solve the problem first?

We did things in tandem really. HFPP brought on Booz Allen Hamilton who were tangentially involved in supporting the challenge. They were brought on board for both the challenge and strategy development work as well as helping to formulate the long-term for the trusted third party.

For Open Payments, they engaged Adobe to do some work around developing two mobile apps. All along the way we worked to keep each [TopCoder and Adobe] informed of what was happening. Working with Adobe gave us some good insight into what we were seeing being developed on the TopCoder side. This strategy helped us keep the NASA challenge in an operational context.

As a direct result of engaging Adobe to produce the apps that are now released to the public, we were then able, and still are today, to share a lot of the information that we learned in the challenge. Adobe has taken the product of the NASA challenge and is continuing to fine tune and use it. This arrangement was particularly useful for idea generation. The app is released to the public, but, at this time, it's just the stakeholders and the Program itself who are the ones using it. We are still working on how best to use the app.

The Mobile apps developed by Adobe provide a record of the transaction that the industry representative and the physician have communicated with each other about. The thing that came from the NASA challenge was the link to other data that can then be used to validate the data recorded as part of that transaction. If this is in place, specific data can be highlighted on the spot and

checked with the Physician. That's the piece of the TopCoder product that we're trying to use to add these types of features. We are reaching out through the focus group to see if that would be welcome.

f. What would have been the traditional method you would have used to achieve your goal?

We would have engaged in traditional contracts for both. When we decided to do the challenges, we also used the traditional track as well. The challenges were used to inform and enhance the traditional track. The challenges were used to help with our strategic approach. If we had just used the traditional track we would have done pure contracting: laying out a strategy, deciding on a scope of work, getting input on that, and then going with a contracting vehicle. As we participated in these challenges, we actually used that to guide and set targets for the contractors we already had on board. The challenges altered the way we were thinking about the project and helped create contract deliverables and a more creative strategy for going forward.

For example, it helped us engage Adobe into doing some creative thinking and doing some rethinking about how the app would have to interface with other data sources, what the security impact would be, etc. It was a way of coming up with these new and innovative ideas we otherwise wouldn't have had. There was definite value add in having the approaches work in tandem.

2. Describe the internal approval process for running the challenge
   a. What did it take to gain approval?
   b. How did you obtain funding?
   c. Were there any obstacles to running the challenge and how did you overcome them?

Chip took it on the chin for anyone at CMS that's going to be conducting a challenge. His approval process and governance process was far stricter than ours had to be.

Our component and Center viewed running a challenge as a way to uncover brilliant ideas we would otherwise be blind to, and, on the spot, add those to the traditional work that was already in work. Since we were a new Program, there were no pre-ordained protocols. Chip was under a vastly different circumstance. There was nothing we had to be concerned with breaking or had to wrestle with. We were able to be far more agile in taking the new ideas, evaluating those, and bouncing those off the traditional approach and continuing to move forward at a pretty fast pace.

We viewed it as a way to get new ideas inserted from the beginning and incorporate those ideas along the way. With both the challenge and the

traditional processes running in parallel, it allowed us to take those new ideas and place them in the context of the traditional approach and from the get-go incorporate that into everything we were doing. Running the challenges allowed us to enhance the traditional process quite dramatically.

The challenges helped us be more informed on how then to inform the scope of our traditional contracts. It helped us inform those in terms of writing that traditional statement of work. Using challenges could potentially accelerate things because, if we were blind to the things we learned ,we might have to slow down and rework later in the life of the project. Using what we learned in the challenges really helped us capture information and ideas that help avoid modifications later.

3. Can you describe what lead you to use the topcoder platform?

We were assigned it: You will use TopCoder!

a. Were you generally satisfied with your experience with this vendor?

Yes, we were satisfied. They were great! The only thing that we would suggest changing is the fact that they used a member of their community to run the challenge. There was an issue with the Co-pilot and TopCoder changed him out three-quarters of the way through the challenge. Both challenges were affected by this. That required the whole process of bringing someone else up to speed. It was pretty seamless and TopCoder did a good job, but it was a distraction and caused a bit of a schedule delay.

b. What suggestions would you make to improve the process?

The process is what it is. The fact that the contests build off of each other, that somebody will use the product of one challenge as the input to the next challenge, made it somewhat challenging. Having to run another contest later to change that product was kind of a roadblock.

So each contest builds on the previous. Down the road, it becomes recognized that a change needs to be made. Let's say something from contest 1 that happened several contests ago, now needs to be changed. Well, it shakes the foundation of the entire project. This highlighted for us how critical it is to get contest awards right early on because that is what builds on the next piece. You have to know with 100% certainty the award you're making is the right one since it will influence the entire process. If it's not a good choice, then it could cause a lot of problems later on. Of course, an approach is that you build in upfront a bunch of empty contests and extend the timeline.

We understood from the beginning that TopCoder, based on their experience,

builds in somewhat of a cushion, but the work basically needed to be done by the end of November. For us there were real schedule limits. We might have had a little more flexibility otherwise.

4. What processes/operational procedures did you put in place to run the challenge?

The project leads were devoted mostly full-time [although it was not the only work on their plates]. We and TopCoder would touch base and go over major briefing points on a weekly basis bringing the entire team up to speed. In those discussions we would bring in additional lessons learned and/or results from the contests. The weekly progress reports worked well along with other various touch points along the way.

a. What resources did you use to execute? If possible, could you break it down into the following phases:
b. Pre-Competition (e.g., problem definition and challenge design)
c. Competition (Launch & marketing, contest/challenge support)
d. Evaluation (judging and selection of winners)
e. Post-Competition (Solver verification and implementation)

Our involvement at the beginning of the challenge was very heavy: conceptualization, requirements, answering forum questions. Constant communication occurred with the TopCoder Project Manager and the Co-pilot. It was very heavy at the beginning, then a straight arrow decline from there. It picked up again somewhat in the middle, and the last third there was limited involvement.

There is a ton of effort and time at the front of it because you need to make sure that TopCoder fully understands what you're asking them to do, and the people in the community need to understand as well. There are a LOT of community questions. It requires a lot of review and making sure that they are on the right track. Once conceptualization is complete, the load is lightened. That load does decrease as the contests build off of each other. That first quarter is intense.

TopCoder made that clear to us from the beginning and that was clearly communicated in the kick off that way. It wasn't a surprise.

5. Describe the outcomes of the challenge:
   a. What product did you receive?

There were a lot of things we received: From the HFPP challenge, we took away the ability to actually conceptualize what we are looking to acquire in the next six months. So we'll do the acquisition and then it will build out over a year.

We received, user interfaces, the study interfaces, and they are sitting out there on Github. Those things can be used as a reference in building the actual product in the future. There's potential that we might use the actual user interface.

A way to summarize what we got is to think of it like this: we decided to build a house. And the challenge community helped architect what will eventually get built. We, CPI, received some architectural drawings and concepts, some model designs, that we will use as we go forward.

b. What are you doing, or do you plan to do, with the result of the challenge?

See a.

c. If the result was not what you expected, what factors contributed to the result?

d. Is there anything you learned, that you wish you had known before running the challenge?

For HFPP, it took us a long time to get the challenge off the ground. We would launch, then have to regroup. This highlighted for us that we were going into this while we were still grying to figure out what the Program was and what the Program needed at the same time we were telling the community "go do this."

We would put it out there and the community would tear it apart. We needed to know better what we were really asking for. Although, even this part of the effort was healthy because it made made us be certain about what what we were asking for and what we were going to do with it.

We basically only had some high level descriptions that through the challenge process we had to rearticulate and hone down the challenges. This was one of the more healthy experiences. If he had to offer a recommendation it would be to do more of that up front thinking so the challenge life span can be spent on building the product itself.

We were helped by having Chip as part of the kick off. Also, having TopCoder in there and presenting the results of the contests and the findings and coming in and presenting to senior leadership, particularly presenting the final product, was an important part of the process.

e. Would you run a challenge again?

Definitely! We are getting to a point where we have a few new ideas on the Open Payments side such as how to use this data, how to combine it with other sources, and how to make it more widely available. We could definitely see a future challenge around other uses of the Open Payments data to get some out of the box ideas. We've kicked it around some and talked through some ideas about data quality, other data sets that may be sitting out there that we could use. We see a tremendous opportunity to tie financial information, particularly with drug companies, that could be really advantageous in the health care delivery business.

For HFPP, now that we are on the cusp of having a trusted third party, we see potential for more on the analytics side. We have an idea around a possible challenge for intaking and combining data and coming up with different analytical algorithms to apply to the data and uncovering waste, fraud, and abuse.

6. What value did you receive from the challenge(s)?

The value of the ideas we received and the schedule, we can see where, in the future, this type of path of using challenges could replace the acquisition and contract process, and it, alone, could deliver what the stakeholder is looking for as an end result.

For us, and how we used these challenge, the value was in the information we received and how beneficial it was to run this parallel to the traditional process.

a. Would you say you used the challenges as a risk reduction technique? If so, can you characterize your return on investment?

Our return on investment was totally met. If we went back and did some detailed analysis I'm pretty sure we could quantify that for you. From our perspective, it paid for itself.

7. What surprised you about the process?

We were totally surprised at what we were able to do and the quality of what we received.

8. Now that you've done this, what is the level of buy-in within your organization?

CPI has bought into this process. We see tremendous value and it's sold internally.